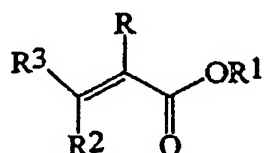


What is claimed is:

1. A lubricant composition having good frictional properties, comprising base oil and at least one additive having friction-modifying properties, characterized in that the additive having friction-modifying properties is a block copolymer which includes hydrophobic segments P and polar segments D, said hydrophobic segments being obtained by polymerization of monomer compositions which comprises

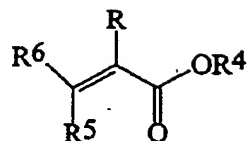
a) from 0 to 40% by weight, based on the weight of the monomer compositions for preparing the hydrophobic segments, of one or more ethylenically unsaturated ester compounds of the formula (I)



(I),

in which R is hydrogen or methyl, R¹ is a linear or branched alkyl radical having from 1 to 5 carbon atoms, R² and R³ are each independently hydrogen or a group of the formula -COOR' in which R' is hydrogen or an alkyl group having from 1 to 5 carbon atoms,

b) from 50 to 100% by weight, based on the weight of the monomer compositions for preparing the hydrophobic segments, of one or more ethylenically unsaturated ester compounds of the formula (II)

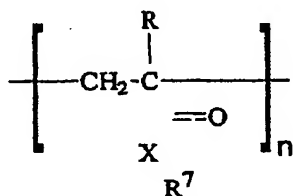


(II),

in which R is hydrogen or methyl, R⁴ is a linear or branched alkyl radical having from 6 to 30 carbon atoms, R⁵ and R⁶ are each independently hydrogen or a group of the formula -COOR" in which R" is hydrogen or an alkyl group having from 6 to 30 carbon atoms,

c) from 0 to 50% by weight, based on the weight of the monomer compositions for preparing the hydrophobic segments, of comonomers,

and the polar segments being illustratable by the formula (III)



(III),

in which R is independently hydrogen or methyl, R⁷ is independently a group comprising from 2 to 1000 carbon atoms and having at least one heteroatom, X is independently a sulfur or oxygen atom or a group of the formula NR⁸ in which R⁸ is independently hydrogen or a group having from 1 to 20 carbon atoms, and n is an integer greater than or equal to 3.

2. The lubricant composition as claimed in claim 1, characterized in that the R⁷ radical in formula (III) at least one group of the formula -OH or

$-NR^8R^8$ in which the R^8 radicals independently includes hydrogen or a group having from 1 to 20 carbon atoms.

- 5 3. The lubricant composition as claimed in claim 1 or 2, characterized in that the X group in formula (III) can be illustrated by the formula NH.
- 10 4. The lubricant composition as claimed in one of the preceding claims, characterized in that the numerical ratio of heteroatoms to carbon atoms is in the range from 1:1 to 1:5.
- 15 5. The lubricant composition as claimed in one of the preceding claims, characterized in that the R^7 radical comprises at most 10 carbon atoms.
- 20 6. The lubricant composition as claimed in one of the preceding claims, characterized in that the polar segment D is obtainable by polymerization of aminoalkyl (meth)acrylates, aminoalkyl (meth)acrylatamides and/or hydroxyalkyl (meth)acrylates.
- 25 7. The lubricant composition as claimed in claim 6, characterized in that the polar segment D is obtainable by polymerization of 2-hydroxyethyl methacrylate and/or N-(3-dimethylaminopropyl)methacrylamide.
- 30 8. The lubricant composition as claimed in one of the preceding claims, characterized in that the block copolymer is a diblock, triblock, multiblock, comb and/or star copolymer.
- 35 9. The lubricant composition as claimed in claim 8, characterized in that m and n are independently 1 or 2.

10. The lubricant composition as claimed in claim 8 or 9, characterized in that the hydrophobic segment P has a weight-average degree of polymerization in the range from 20 to 5000.

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11. The lubricant composition as claimed in claim 8 or 9, characterized in that the polar segment D has a weight-average degree of polymerization in the range from 10 to 1000.

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12. The lubricant composition as claimed in one of claims 8 to 11, characterized in that the weight ratio of the polar segments D to the hydrophobic segments P is in the range from 1:1 to 1:100.

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13. The lubricant composition as claimed in one of the preceding claims, characterized in that the lubricant oil composition comprises viscosity index improvers, antioxidants, corrosion inhibitors, detergents, dispersants, EP additives, defoamers, friction modifiers and/or demulsifiers.

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14. The lubricant composition as claimed in one of the preceding claims, characterized in that the block copolymer comprising the segments P and D is present in an amount of from 0.01 to 100% by weight, in particular from 0.01 to 50% by weight.

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15. A process for producing lubricant composition as claimed in one of claims 1 to 14, characterized in that monomer compositions are polymerized in a lubricant oil by means of initiators which have a transferable atom group and one or more catalysts which comprise at least one transition metal, in the presence of ligands which can form a coordination compound with the metallic catalyst(s), to separately form hydrophobic and polar segments by variation of the monomer composition during the

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polymerization.

16. A process for preparing lubricant composition as claimed in one of claims 1 to 14, characterized in that monomer compositions are polymerized in a lubricant oil in the presence of dithiocarboxylic ester, to separately form hydrophobic and polar segments by variation of the monomer composition during the polymerization.

17. The use of a lubricant composition as claimed in one of claims 1 to 14 as gear oils, motor oils, hydraulic oils or greases.

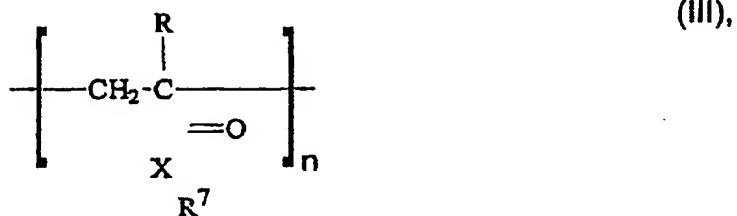
b) from 50 to 100% by weight, based on the weight of the monomer compositions for preparing the hydrophobic segments, of one or more ethylenically unsaturated ester compounds of the formula (II)



in which R is hydrogen or methyl, R⁴ is a linear or branched alkyl radical having from 6 to 30 carbon atoms, R⁵ and R⁶ are each independently hydrogen or a group of the formula -COOR" in which R" is hydrogen or an alkyl group having from 6 to 30 carbon atoms,

c) from 0 to 50% by weight, based on the weight of the monomer compositions for preparing the hydrophobic segments, of comonomers,

and the polar segments being illustratable by the formula (III)



in which R is independently hydrogen or methyl, R⁷ is independently a group comprising from 2 to 1000 carbon atoms and having at least one heteroatom, X is independently a sulfur or oxygen atom or a group of the formula NR⁸ in which R⁸ is independently hydrogen or a group having from 1 to 20 carbon atoms, and n is an integer greater than or equal to 3.